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Attorney Docket No. 0756-7221

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Toshimitsu KONUMA

Serial No. 10/728,932

Filed: December 8, 2003

For: ELECTRO-OPTICAL DEVICE WITH  
LIQUID CRYSTAL

) Group Art Unit: 2871

) Examiner: H. Ngo

) CERTIFICATE OF MAILING

) I hereby certify that this correspondence is  
) being deposited with the United States Postal  
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) Mail in an envelope addressed to:  
) Commissioner for Patents, P.O. Box 1450,  
) Alexandria, VA 22313-1450, on January 21,  
) 2005.

Adrian M. Stamps

**AFTER FINAL RESPONSE**

Honorable Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The Official Action mailed October 21, 2004, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statement filed on December 8, 2003. For the record, it is noted that the Examiner placed his initials next to the citation of "Matumoto et al., 'New Hybrid-Aligned Nematic Multicolor Liquid-Crystal Display,' Oyo Buturi, Vol. 45, No. 1, pp. 853-856, 1976" on a copy of page 1 of 3 of the Form PTO-1449 submitted with the Information Disclosure Statement filed December 8, 2003, which was dated "4/16/04" and attached to the Official Action mailed April 23, 2004 (Paper No. 20040416)(copy attached). However, it appears that the Examiner inadvertently overlooked the citation of the Matumoto article on a copy of page 1 of 3 of the Form PTO-1449 submitted with the Information Disclosure Statement filed December 8, 2003, which was dated "10/15/04" and attached to the Official Action mailed October 21, 2004 (Paper No. 20041016)(copy

attached). Based on the Examiner's apparent consideration of the Matumoto article in Paper No. 20040416, it is believed that the Matumoto article has been fully considered by the Examiner.

Claims 6-16 are pending in the present application, of which claims 6 and 12 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 6-9 and 12-15 under the doctrine of obviousness-type double patenting over claims 13, 14 and 16 of U.S. Patent No. 6,693,696 to Konuma. As stated in MPEP § 804, under the heading "Obviousness-Type," in order to form an obviousness-type double patenting rejection, a claim in the present application must define an invention that is merely an obvious variation of an invention claimed in the prior art patent, and the claimed subject matter must not be patentably distinct from the subject matter claimed in a commonly owned patent. Also, the patent principally underlying the double patenting rejection is not considered prior art. In any event, the Applicants respectfully request that the double patenting rejections be held in abeyance until an indication of allowable subject matter is made in the present application. At such time, the Applicants will respond to any remaining double patenting rejections.

The Official Action rejects claims 6-16 as obvious based on the combination of U.S. Patent No. 5,250,214 to Kanemoto et al., U.S. Patent No. 4,983,023 to Nakagawa et al. and U.S. Patent No. 5,327,269 to Tilton et al. It further appears that the Official Action relies on U.S. Patent No. 4,566,758 to Bos to support the rejection. However, it is unclear that the Bos reference is officially of record with respect to the obviousness rejection of the claims. The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available

to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claims 6 and 12 recite a pair of orientation films having antiparallel orientation directions to each other. The Official Action implicitly concedes that Kanemoto and Nakagawa do not teach or suggest a pair of orientation films having antiparallel orientation directions to each other (pages 3-4, Paper No. 20041016). The Official Action asserts that Tilton teaches "(col. 2 lines 24-31) forming a LVD [LCD] comprising pair of orientation films having antiparallel orientation directions to each other for fast switching between the cell states because the motion of the liquid crystal material is limited" (Id.). The Applicants respectfully disagree and traverse the above-referenced assertion in the Official Action.

Tilton appears to refer to U.S. Patent No. 4,566,758 to Bos, which was cited in the previous Official Action. Bos appears to teach how to fabricate a fast optical shutter having a reduced response time and the liquid crystal cell in Bos is a pi ( $\pi$ ) cell. Tilton asserts that Bos teaches that the transparent plates are oriented antiparallel to each other. The Applicants traverse Tilton's characterization of Bos. As noted on page 8 of

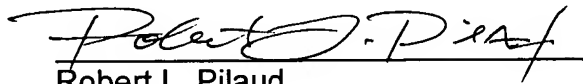
the *Amendment* filed August 23, 2004, although Bos may teach a pair of orientation films having parallel orientation directions to each other, Bos does not teach or suggest a pair of orientation films having antiparallel orientation directions to each other.

Attached, please find a document entitled LIQUID CRYSTAL HANDBOOK, Edited by Liquid Crystal Handbook Editors Commission, Maruzen Co., Ltd., Published on October 30, 2000, with a partial English translation, which shows an LCD device having orientation films with antiparallel orientation directions and a  $\pi$  cell having the alignment condition similar to that of Bos. The disclosed structure of the antiparallel rubbing cell in the Maruzen Co. document is in contrast with the structure shown in Bos. Although Tilton asserts that Bos teaches that "the transparent plates are oriented antiparallel to each other," the Applicants respectfully submit that Tilton mischaracterizes Bos. Bos, at best, may teach a pair of orientation films having parallel orientation directions to each other. Kanemoto, Nakagawa and Tilton, either alone or in combination, do not teach or suggest a pair of orientation films having antiparallel orientation directions to each other.

Since Kanemoto, Nakagawa and Tilton do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Robert L. Pilaud", written over a horizontal line.

Robert L. Pilaud  
Reg. No. 53,470

Robinson Intellectual Property Law Office, P.C.  
PMB 955  
21010 Southbank Street  
Potomac Falls, Virginia 20165  
(571) 434-6789